CABINET MOUNTAINS WATER DISTRICT (PWS# 1110042)
SOURCE WATER ASSESSMENT REPORT

February 26, 2003

State of Idaho
Department of Environmental Quality

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This risk assessment is based on a land use inventory in the recharge zone, sensitivity factors associated with how the source was constructed, and aquifer characteristics.

This report, *Source Water Assessment for the Cabinet Mountains Water District*, describes the public drinking water wells; the well recharge zone and potential contaminant sites located inside the recharge zone boundaries. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this public water system. **The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The Cabinet Mountains Water District, located on the south side of the Kootenai River about 4 miles east of Bonners Ferry, Idaho operates a community water system with 641 connections serving a population of 810 in rural Boundary County (Figure 1). Water for fire protection and domestic use is supplied by two 150-foot deep wells.

A susceptibility analysis DEQ conducted January 28, 2003 ranked the Cabinet Mountains Water District wells at moderate risk of becoming contaminated. Most of the points counted against the wells derive from risks associated with local geology. The wells have a good water quality history.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Continuing to operate and maintain the wells in compliance with the *Idaho Rules for Public Drinking Water Systems* is the most important drinking water protection tool available to the Cabinet Mountains Water District. The District should consider forming ground water protection partnerships with landowners in the recharge zone, and help them assess household, business and agricultural activities for their potential impact on water quality. Developing a water emergency response plan is also an important part of an overall drinking water protection strategy.

Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. For assistance in developing protection strategies, please contact your regional Department of Environmental Quality office or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR CABINET MOUNTAINS WATER DISTRICT

Section 1. Introduction - Basis for Assessment

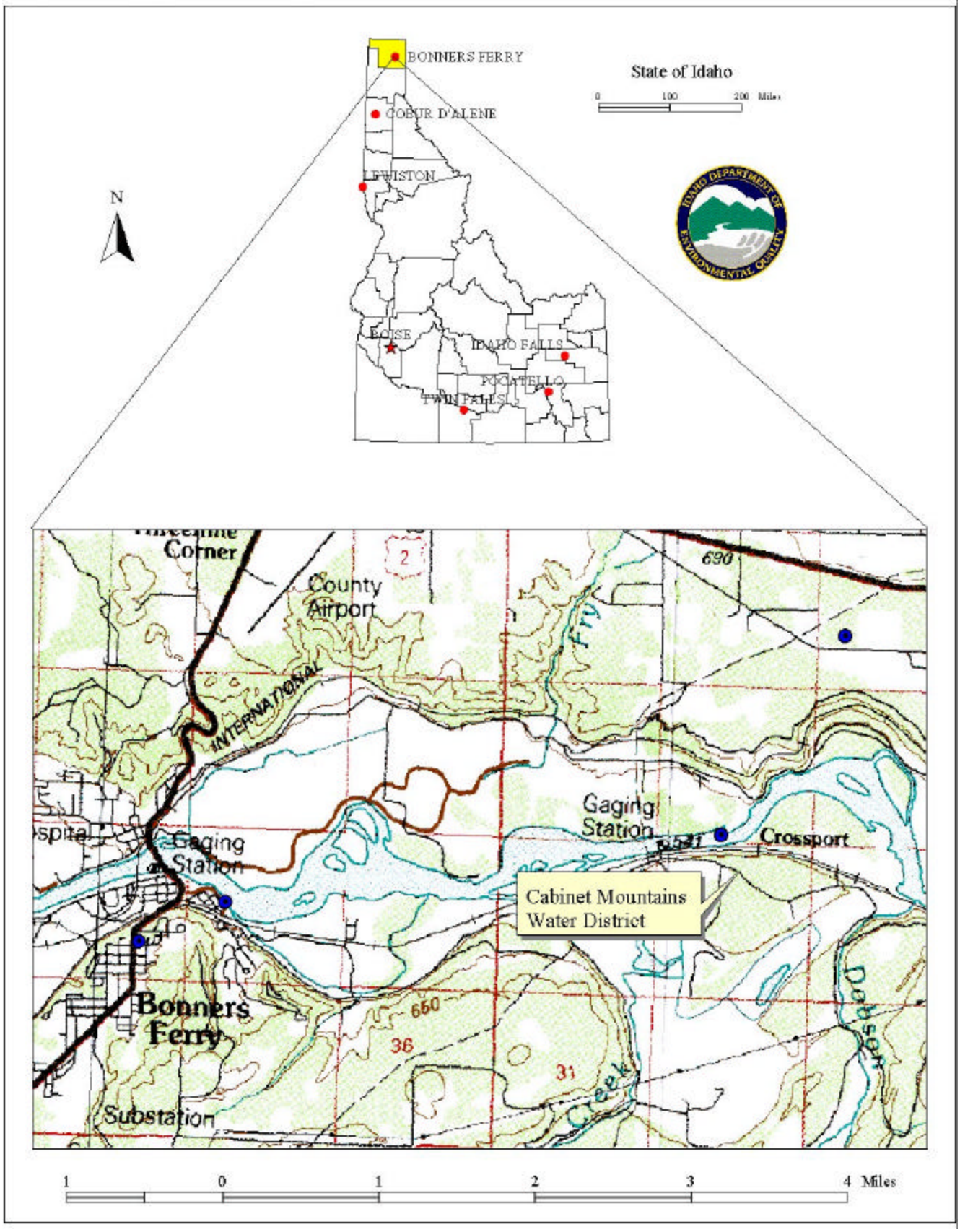
The following sections contain information necessary for understanding how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and an inventory of significant potential sources of contamination identified within that area are included. The ground water Susceptibility Analysis Worksheet used to develop this assessment is attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess every public drinking water source in Idaho for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. These assessments are based on a land use inventory inside the delineated recharge zones, sensitivity factors associated with how the well is constructed, and aquifer characteristics. The state must complete more than 2900 assessments by May of 2003. Because resources and the time available to accomplish assessments are limited, an in-depth, site-specific investigation for every public water system is not possible.

The results of the source water assessment should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system. The ultimate goal of this assessment is to provide data to local communities for developing a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Figure 1. Geographic Location of Cabinet Mountains Water District



Section 2. Preparing for the Assessment

Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment and future protection efforts. The process includes mapping the boundaries of the well recharge area into time of travel zones indicating the number of years necessary for a particle of water flowing through the aquifer to reach a well. The ground water flow model incorporated data DEQ assimilated from a variety of sources including local well logs and pumping volume estimates for the Cabinet Mountains Water District wells.

Due to their close proximity the wells were treated as one source with a common recharge zone. Well logs for these sources, which are located just above the floodplain of the Kootenai River, indicate both wells are 150 feet deep, cased to about 130 feet with a screened interval from 130 to 150 feet, and are completed in coarse gravel, sand, and boulders. The stated static water levels are 60 feet below ground surface.

The pumping volume (26,738 ft^3 per day) was estimated from a population served of 810 and a multiplier of 1.5. Based on the well logs the saturated thickness of the aquifer is estimated to be 90 feet. A gradient of 0.005 was estimated based on differences in the hydraulic head between several local well pairs. A value of 60 feet per day was used for hydraulic conductivity. This is a reasonable value, given the coarse nature of the material the wells are completed in (gravel and boulders) and the highly productive capacity of the wells themselves, apparently more than 500 gallons per minute.

Based on these assumptions the uniform flow method was used to generate the time of travel zones. The lengths of the 3, 6 and 10 year time of travel zones were estimated to be 1700, 3100, and 4900 feet, respectively. The width was estimated at 1000 feet. These zones were then rotated to account for uncertainty in the direction of ground water flow. The resulting delineation is shown in Figure 12 and is generally oriented in a southeast to northwest direction with the assumption being the ground water system is generally moving from the upper benches toward the Kootenai River as a discharge location. Some component of the flow to the wells could also be derived from the Kootenai River to the east.

Identifying Potential Sources of Contamination

The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. Inventories for all public water systems in Idaho were conducted in two-phases. The first phase involved identifying and documenting potential contaminant sources within a system's source water assessment area through the use of computer databases and Geographic Information System maps developed by DEQ. Maps showing the delineations and tables summarizing the results of the database search were then sent to system operators for review and correction during the second or enhanced phase of the inventory process.

Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. When a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation.

Section 3. Susceptibility Analysis

The susceptibility to contamination of all ground water sources in Idaho is being assessed on the following factors:

- physical integrity of the well,
- hydrologic characteristics,
- land use characteristics, and potentially significant contaminant sources
- historic water quality

The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. A high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking. The Susceptibility Analysis Worksheets for the Cabinet Mountains Water District wells in Attachment A show in detail how the wells scored.

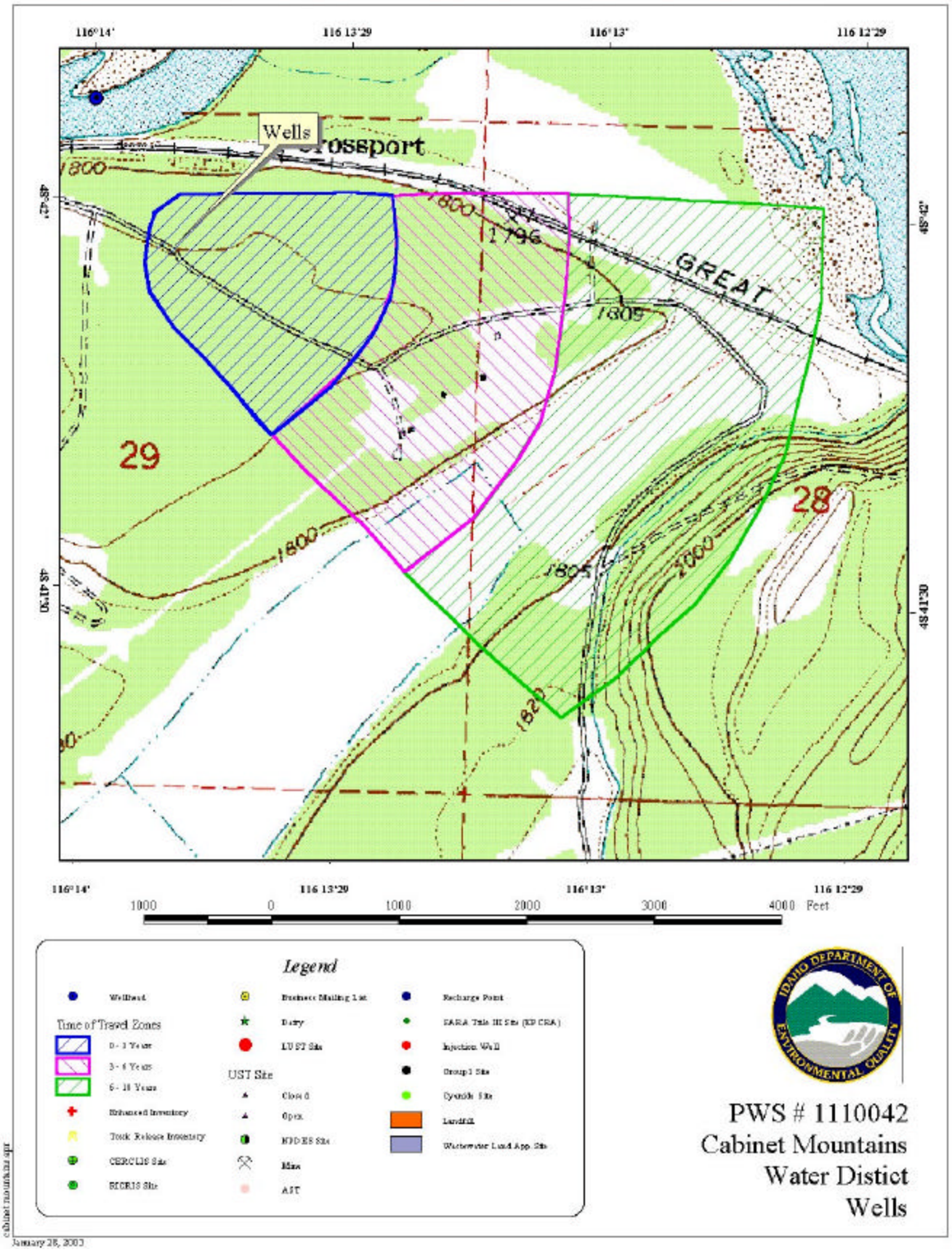
Well Construction

Construction features directly affect the ability of the wells to protect the aquifer from contaminants. Lower scores imply a well that can better protect the water. This portion of the susceptibility analysis relies on information from individual well logs and from the most recent sanitary survey of the public water system. Well logs are available for both of the Cabinet Mountains Water District wells. When the water system was inspected in October 1996 it was being operated and maintained in substantial compliance with the *Idaho Rules for Public Water Systems.*

The Cabinet Mountains Water District drilled three wells in October 1995. One of the wells was capped off and is not currently connected to the distribution system. It is not evaluated in this report. Both active wells have 0.25 inch thick steel casings, 12 inches in diameter, that extend from 2 feet above grade to 128 feet below ground surface. The well screens are set from 128 to 148 feet. The well logs report the static water level at 60 feet below ground. Well #1 is sealed to a depth of 30 feet with cement. The surface seal on Well #2 is 18 feet deep. Current Idaho Department of Water Resources well construction standards specify a 20-foot minimum seal depth for wells in unconsolidated formations without clay beds. The standards also specify a minimum 0.375-inch wall thickness for 12-inch steel casing.

The wells are located about 700 feet south of the Kootenai River on a small rise that elevates the wellheads above the surrounding flood plain. A site inspection and records review in June 1999 concluded that the wells are not surface water influenced.

Figure 2. Cabinet Mountains Water District Delineation and Potential Contaminant Inventory.



Hydrologic Sensitivity

Hydrologic sensitivity scores reflect natural geologic conditions at the well site and in the recharge zone. Information for this part of the analysis is derived from individual well logs and from the soil drainage classification inside the delineation boundaries. The Cabinet Mountains Water District Cabinet Mountains Water District wells scored 4 points out of 6 points possible in the hydrologic sensitivity portion of the susceptibility analysis.

Soils in the recharge zone for the wells are generally are poorly to moderately well drained. Soils that drain slowly are deemed more protective of ground water than rapidly draining soil. At the well sites, however, the entire soil column is composed of highly permeable sand, gravel, cobbles and boulders. There are no clay beds to protect the ground water from vertical transport of contaminants. First water was encountered 64 feet below the surface.

Potential Contaminant Sources and Land Use

Land use in the recharge zone delineated for the Cabinet Mountains Water District wells is primarily suburban with agricultural land occupying 45 to 50 percent of the 3-6 and 6-10 year time of travel zones. A rail line also crosses these zones. County roads crossing all time of travel zones appear to carry local traffic only and are probably not a significant potential source of contaminants. Locations of homes and septic tanks relative to the wells are not documented in the public drinking water system file for Cabinet Mountains Water District.

Historic Water Quality

The Cabinet Mountains Water District wells have had no persistent water quality problems. Routine monthly samples were positive for total coliform bacteria in December 1999 and January 2002. Follow up samples were negative. Chemical and radiological sampling results for the Cabinet Mountains wells are summarized on the table below.

Table 1. Cabinet Mountains Water District Chemical Sampling Results

Primary IOC Contaminants (Mandatory Tests)							
Contaminant	MCL (mg/l)	Results (mg/l)	Dates	Contaminant	MCL (mg/l)	Results (mg/l)	Dates
Antimony	0.006	ND	2/7/95, 12/15/98, 5/23/01	Nitrate	10	0.262 to 1.7	2/7/95 through 12/30/02
Arsenic	0.01	ND	2/7/95, 12/15/98, 5/23/01	Nickel	N/A	ND	2/7/95, 12/15/98, 5/23/01
Barium	2.0	ND	2/7/95, 12/15/98, 5/23/01	Selenium	0.05	ND	2/7/95, 12/15/98, 5/23/01
Beryllium	0.004	ND	2/7/95, 12/15/98, 5/23/01	Sodium	N/A	6.0 to 12	2/7/95, 12/15/98, 5/23/01
Cadmium	0.005	ND	2/7/95, 12/15/98, 5/23/01	Thallium	0.002	ND	2/7/95, 12/15/98, 5/23/01
Chromium	0.1	ND	2/7/95, 12/15/98, 5/23/01	Cyanide	0.02	ND	12/30/02
Mercury	0.002	ND	2/7/95, 12/15/98, 5/23/01	Fluoride	4.0	0.18 to 0.20	2/7/95, 12/15/98, 5/23/01

Secondary and Other IOC Contaminants (Optional Tests)			
Contaminant	Recommended Maximum (mg/l)	Results (mg/l)	Dates
Iron		0.08 mg/l	2/7/95

Table 1. Cabinet Mountains Water District Chemical Sampling Results continued			
Regulated and Unregulated Synthetic Organic Chemicals			
Contaminant		Results	Dates
29 Regulated and 13 Unregulated Synthetic Organic Compounds		None Detected	12/16/96, 12/26/01
Regulated and Unregulated Volatile Organic Chemicals			
Contaminant		Results	Dates
21 Regulated And 16 Unregulated Volatile Organic Compounds		None Detected	2/7/95, 12/15/98, 5/23/01
Radiological Contaminants			
Contaminant	MCL	Results	Dates
Gross Alpha, Including Ra & U	15 pC/l	0.6 to 4.1. pC/l	10/24/95, 12/16/96, 11/14/00
Gross Beta Particle Activity	4 mrem/year	2.3 to 4.0 mrem	10/24/95, 12/16/96, 11/14/00

Final Susceptibility Ranking

The Cabinet Mountains Water District Cabinet Mountains Water District wells are at moderate risk relative to all classes of regulated contaminants. Most of the points marked against the wells in the final susceptibility scores derive from risks related to local geology. The water table is relatively shallow and soils at the well site are coarse and permeable. Total scores for system construction and hydrologic sensitivity along with the cumulative scores for land use and potential contaminant sites are shown on Table 2. The complete Susceptibility Analysis Worksheets for the Cabinet Mountains Water District wells are in Attachment A.

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scores/Ranking

The final ranking categories are as follows:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility.

Table 2. Summary of Cabinet Mountains Water District Susceptibility Evaluation

Cumulative Susceptibility Scores						
Well Name	System Construction 0-6 possible	Hydrologic Sensitivity 0-6 possible	Contaminant Inventory plus Land Use			
			IOC 0-30 possible	**VOC** 0-30 possible	**SOC** 0-30 possible	**Microbial** 0-14 possible
Well #1	4	4	7	7	7	1
Well #2	4	4	7	7	7	1

Final Susceptibility Scores/Ranking				
Well Name	IOC 0-18 possible	VOC 0-18 possible	SOC 0-18 possible	Microbial 0-15 possible
Well #1	9/Moderate	9/Moderate	9/Moderate	8/Moderate
Well #2	9/Moderate	9/Moderate	9/Moderate	8/Moderate

Low numbers are favorable because high scores indicate increased susceptibility to contaminants
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Cabinet Mountains Water District already has some important drinking water protections in place for its wells. The district owns the land around the wells and is able to restrict activities that could contaminate them. The district should consider covering the wellheads and fencing the well lots for additional security. The district was operating and maintaining the water system in substantial compliance with the *Idaho Rules for Public Drinking Water Systems* when it was inspected in 1996. Water quality monitoring is up to date.

Because the system is in an area experiencing fairly rapid growth, the potential contaminant inventory in the recharge zone should be reviewed periodically. The 0-3 year time of travel zone is particularly sensitive. If homes in this zone have individual septic systems, the risk of the wells becoming contaminated with nitrates and microbials starts to increase when the septic system density exceeds 10 in 40 acres. Community drainfields located in the 0-3 year time of travel zone also increase the microbial and nitrate risk.

Because public education is an important part of any protection plan, the District should consider visiting landowners in the delineated area to distribute appropriate best management practices brochures. Many of them may not be aware that they are in a well recharge zone where household, business or agricultural practices could have a negative impact on the community water supply. Partnerships with governmental agencies should also be established. Ground water protection measures related to agriculture could be coordinated through the county extension office for instance or the Natural Resource Conservation Service.

Cabinet Mountains Water District is fortunate to have two active wells and a third well already drilled as a backup source. Nevertheless, the District should have a written water emergency response plan. There is a simple fill-in-the-blanks form available on the DEQ website (www.deq.state.id.us/water/water1.htm) to guide systems through the process.

Assistance

Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Idaho Department of Environmental Quality

Coeur d'Alene Regional IDEQ Office	(208) 769-1422
State IDEQ Office, Boise	(208) 373-0502
Website:	http://www.deq.state.id.us/

Idaho Rural Water Association

Melinda Harper, Groundwater Protection Specialist	(800) 962-3257
Website:	http://www.idahoruralwater.com

Idaho Association of Soil Conservation Districts

Water quality and soil conservation	(208) 338-5900
Website:	http://www.iascd.state.id.us/

References Cited

Freeze, R.A., and J.A. Cherry, 1979, Groundwater, Prentice-Hall, Inc., 604 p.

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

Idaho Department of Environmental Quality, 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.

Idaho Division of Environmental Quality, 1999, Idaho Source Water Assessment Plan, October, 39 p.

Idaho Division of Environmental Quality, 1997, Idaho Wellhead Protection Plan, Idaho Wellhead Protection Work Group, February.

Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

Theis, C.V., 1935, The Relation between Lowering of the Piezometric Surface and the Rate and Duration of Discharge of a Well Using Groundwater Storage, Trans. Amer. Geophysical Union, v. 16, pp. 519-524.

Attachment A

Cabinet Mountains Water District
Susceptibility Analysis Worksheet

Ground Water Susceptibility

Public Water System Name : **CABINET MOUNTAINS WATER DIST** Source: **WELL 1**

Public Water System Number : **1110042** 1/28/03 7:53:43 AM

1. System Construction		SCORE			
Drill Date	10/15/95				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES 1996				
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		**4**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		**4**			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		Score	Score	Score	Score
Land Use	SUBURBAN	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		**1**	**1**	**1**	**1**
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	YES Rail line, county road	2	2	2	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Land Use Zone II	40- 50% Non-Irrigated Agricultural Land	1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		**4**	**4**	**4**	**0**
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Do irrigated agricultural lands occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		**2**	**2**	**2**	**0**
Cumulative Potential Contaminant / Land Use Score		**7**	**7**	**7**	**1**
4. Final Susceptibility Source Score		**9**	**9**	**9**	**8**
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

Ground Water Susceptibility

Public Water System Name : **CABINET MOUNTAINS WATER DIST** Source: **WELL 2**

Public Water System Number : **1110042** 1/28/03 7:53:56 AM

1. System Construction		SCORE			
Drill Date	10/12/95				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES 1996				
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		**4**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		**4**			
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use	SUBURBAN	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		**1**	**1**	**1**	**1**
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	YES Rail Line, County Road	2	2	2	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Land Use Zone II	40- 50% Non-Irrigated Agricultural Land	1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		**4**	**4**	**4**	**0**
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Do irrigated agricultural lands occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		**2**	**2**	**2**	**0**
Cumulative Potential Contaminant / Land Use Score		**7**	**7**	**7**	**1**
4. Final Susceptibility Source Score		**9**	**9**	**9**	**8**
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

POTENTIAL CONTAMINANT INVENTORY
List of Acronyms and Definitions

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ? Superfund? is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.